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Exhibit “A”
Scope of Services
District-Wide Structures Design
¹Financial Project ID: 198382-1-32-13

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I. DESCRIPTION

Consultant Services are required for structural engineering tasks necessary for production of complete construction plans. The Consultant shall provide any one or more of the engineering tasks listed below in support of the District Structures Program:

1. Design and preparation of complete contract plans for Category 1 bridges
2. Design and preparation of contract documents for miscellaneous structures
3. Review of shop drawings
4. Review of Scour Evaluation Reports prepared by others
5. Preparation of structures CADD (Computer-aided Design and Drafting) drawings
6. Project phase field reviews
7. Review of Structures Related Construction Issues
8. Preparation and /or review of bridge load ratings
9. Participation in Project Value Engineering Study Team
10. Review of non-FDOT funded Projects.
11. Design of approach roadway associated with Category 1 bridge design
12. Peer review of in-house prepared structures design plans
13. Preparation of Bridge Evaluation Report associated with 3-R projects
14. Review of Construction Cost Saving Initiative Proposals
15. Review of contract plans, and other documents prepared by other consultants
16. Analysis and evaluation of existing structures for load modification
17. Field review and evaluation of existing damaged structures

II. OBJECTIVE

The general objective is for the consultant to support the District Structures Office in the administration of the Structures program. Elements of work will depend on the specific task.

All plans and design documents are to be prepared using Standard English Units in accordance with all applicable Department Manuals, Memoranda, and Guidelines. For a list of these Manuals, Memoranda and Guidelines, see the Department Generic Scope of Services for Highway and Bridge/ Structural Design.

The Consultant shall demonstrate good project management practices while working on a given task. These include communication with the Department and others as necessary, management of time and resources, and documentation. It shall be the Consultant 's

responsibility to utilize the very best engineering judgment, practices and principles possible during the prosecution of any task under this contract.

III. SERVICES

- A. Prepare structural design documents for all structure related services, including but not limited to: load capacity analysis, maintenance of traffic alternatives involving structures, feasibility of bridge widening versus replacement, comparison of cost of structural alternatives, steel versus concrete or pre-stressed concrete structures and wall alternatives.
- B. Provide the Estimate Quantity Report and design calculations in accordance with the Florida Design Manual.
- C. Prepare and submit to the Department a Design Documentation Booklet with design notes, reports, calculations, and other related information required to document the design conclusions reached during the development of the construction plans.
- D. Furnish preliminary prints, as required by the Department to adequately control, coordinate and approve the design and to negotiate with utility companies, railroads, and others.
- E. Notify the Department of any utility conflicts and coordinate with the Department in all relocation efforts. The Consultant may represent or assist the Department in obtaining utility and rail permits.
- F. Prepare, submit and coordinate permit application(s), if requested, for submittal to other agencies by the Department including forms, sketches, and hydraulic calculations, or assist in the preparation of said documents as needed.
- G. Make such review, attend such meetings and make such contacts as are necessary for proper preparation of plans and special provisions for these projects.
- H. Prepare scope of services documents and estimated staff-hours for design projects. Individual tasks are defined in the Staff Hour Estimation Handbook.
- I. The Consultant shall, if requested, perform reviews of construction Cost Saving Initiative (CSI) proposals and advise the District Structural Design Engineer on the merits and deficiencies of such proposals.
- J. The Consultant, if requested, shall perform reviews of contractor's proposal for correcting construction errors during construction to include its impact on quality performance and schedule.
- K. The Consultant, if requested, shall perform reviews of structures plans prepared

by other consultants on behalf of the District Structures Design Office.

- L. Provide Post Design Services. These services are intended to address changed conditions that occur following acceptance of final plans. The Consultant shall provide to the Department additional services as required to satisfactorily complete construction. These services are intended to deal with changed conditions or services not covered and is not intended for instances of Consultant errors and/or omissions.

1. Field Reviews

The Consultant, when requested, shall provide additional field reviews prior to and during the construction of the project.

2. Plans Update and Maintenance

The Consultant shall perform engineering analyses and/or make revisions to original “on-shelf” plans or special provisions, as requested by the Department, to update the plans to reflect changed conditions prior to letting. Whenever original plans are changed, the Consultant shall submit to the Department signed and sealed revised sheets. This requirement is in addition to any other reproduction and Delivery instructions given by the Department in specific instances.

3. Construction Assistance

The Consultant shall provide to the Department qualified representation during the construction phase to deal with issues concerning the intent and interpretation of the construction contract plans and documents prepared in the work. Should different conditions be encountered in the field and when requested by the Department, the Consultant shall respond in a timely manner with suitable engineering solutions which take into account the changed conditions.

On site appearance of Consultant shall be made during construction at the written request of the Department or its designated representative.

From time to time during construction, the Consultant may be requested by the Department or its designated representative to review contractor proposed field changes or to respond with a recommended solution to remedy particular field situations not covered by the plans and Specifications.

4. Expert Witness Testimony

The Consultant shall serve as an expert witness in legal proceedings if required by the Department.

5. Review of Shop Drawings

Shop Drawings review shall be performed in accordance with the latest Structures Design Guidelines.

For all independently supported sign structures, mast arms and signal poles for which the contractor is wholly responsible, the Consultant will review and check all the foundation, structure design and shop drawings submitted by the contractor. All such calculations from the contractor should be signed by the Contractor's registered professional engineer. The Consultant shall stamp his or her review of shop drawings as per the Department's review procedure.

IV. GENERAL

A. Roadway Plans

All plans and designs are to be prepared in accordance with the latest standards adopted by AASHTO, Department Standard Specifications, Department current memoranda, Florida Design Manual, Department Flexible Pavement Design Manual, Department Drainage Manual, and shall be accurate, legible, complete in design, and drawn to the appropriate scale, furnished in reproducible form on material acceptable to the Department.

B. Structure Plans

Analyze and design all structures in accordance with applicable provisions as defined in Section 2.20 generic "Scope of Services for Highway and Bridge Structural Design."

C. Disposition of Plan Review Comments

The Consultant shall submit to the Department, at the time of the filing of final plans, the disposition of all plan review comments in written form.

D. CADD

The use of CADD is required for the performance of services required in connection with services covered under this scope including but no limited to key sheets, plan sheets, signing and marking plans, signal plans and lighting plans. CADD deliverable plans/maps shall be produced to the level of quality required

by the Florida Design Manual and the “Department’s CADD Roadway Standards and Guidelines Manual.”

E. Subcontracting

Should the Consultant require the services of a specialist for specialty work, the Consultant is authorized to subcontract these services under the provisions of Paragraph 6.00 of the Standard Consultant Agreement. Firms selected for subcontracts must be approved and qualified by the Department prior to the Consultant authorizing any such work. The Consultant shall be fully responsible for the satisfactory performance of all subcontracted work.

V. DEPARTMENT RESPONSIBILITIES

The Florida Department of Transportation will furnish any or all of the following items as appropriate, for performance of the required services.

- All previously completed field surveys as required.
- Subsoil data and tests for roadway and structure foundations.
- All available roadway plans, bridge plans, right of way maps, studies and other available information pertinent to the project.
- Aerial photography required for preparation of construction plans and right of way maps, if available.
- All available traffic information.
- Right of way maps and legal descriptions which are not part of the consultants work effort, when required.
- Utility and railroad contacts and agreements when not a part of the assigned task.
- When survey services are required, the Department will furnish survey files and/or numbered standard survey books for survey data when required.
- Pavement Design where necessary.
- Coordination and processing of permit applications, when not a part of the assigned tasks.